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PREFERENCE OF DELIVERY AT TERM EITHER NATURAL OR BY EPIDURAL ANALGESIA BY PREGNANT WOMEN IN BRUNEI DARUSSALAM

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ABSTRACT

“Natural” childbirth is a way of giving birth without anaesthesia medication or surgery. Epidural analgesia is the effective way of relieving the pain of contractions with complete relief of pain in 95% of laboring women. In developed countries, over 50% hospitalized women were preferred to have epidural analgesia. This study was carried out to study on the preference of the delivery at term either natural or by using epidural analgesia by pregnant women at the Obstetrics and Gynecology clinics in RIPAS Hospital, Brunei Darussalam. A cross-sectional study was conducted.

The preferred choice of childbirth by pregnant women was “natural” by 74% while by epidural analgesia was 26%. The main reason for opting for natural delivery was to feel the pain by 62% and epidural analgesia for pain-free delivery preferred by 69%. There were no significant associations between the choices of delivery among the races and between age groups, ($p=0.250$, and $p=0.567$ respectively).

In present study, the pregnant women chose to deliver naturally due to their cultural and religious belief. From this study, there was no association between the age and the choices of delivery.

Key Words: *Natural Child Birth, Epidural Analgesia, Obstetrics and Gynecology Clinics, Brunei Darussalam*

INTRODUCTION

Natural childbirth is a way of giving birth without anaesthesia medication or surgery. No drugs are given to aid the process of the birth. Epidural analgesia is a regional analgesia that is most widely used for providing pain relief during labor.

In developed countries, over 50% hospitalized women preferred to have epidural analgesia (Kukulu, 2008).

During the child birth, the pregnant women experience labor pain. The pain results from the uterine contractions and cervical dilatation (Lothian, 2000). Labor pain is one of the most severe varieties of pain (Kukulu, 2008). Some studies showed that women underestimated the pain they would experience in labor (Lally, 2008).

The pain during delivery can be relieved by epidural analgesia. The analgesic medication is injected into the epidural space in the lower back which produces numbness of the body below waist. It is the most effective way of relieving the pain of contractions with complete relief of pain in 95% of laboring women (Symonds, 2004). A woman who receives an epidural analgesia remains awake and aware of her baby's birth and may still feel some pain and contractions but is spared the intense pain of childbirth.

During natural childbirth women can feel the contractions so they know when to push and feel the progress of the baby; without that feeling many women have difficulty pushing and are forced into a C-section (Fraser, 2000).

Epidural analgesia has brought effective relief of labor pain for many mothers. This pain relief facilitates patient cooperation during labour and delivery. Epidural analgesia prevents the adverse biochemical changes that may be associated with the stress of a painful labor. Babies also do better in the neonatal

Research Article

period after maternal epidural block than after pethidine (Thalme, 1974). Epidural analgesia may be particularly valuable in patients with pre-eclampsia. It prevents the exacerbation of hypertension and the rise in noradrenaline concentration that may be associated with pain (Abboud, 1982). In a survey of 6442 births neonatal mortality was reduced with epidural analgesia, particularly for low birth weight babies (David, 1976). The mother may experience short-term effects such as uncontrollable shivering, severe headaches and back pain, nausea, difficulty urinating because the bladder is also numbed along with the uterus (Reynolds, 1989). To our knowledge there has been no study so far to know the choices of delivery by pregnant women in Brunei Darussalam. This study was carried out to study on the preference of the delivery at term either natural or by using epidural analgesia by pregnant women in Obstetrics and Gynecology clinics at RIPAS Hospital, Brunei Darussalam.

The specific objectives were

- a. To describe the reasons why the pregnant women choose to deliver naturally or using epidural analgesia in Obstetrics and Gynaecology clinics, RIPAS Hospital
- b. To determine the correlation of the choices of delivery at term by pregnant women among different races either by natural or using epidural analgesia in the clinics
- c. To determine the correlation of using epidural analgesia or not among the pregnant women between the age group.

MATERIALS AND METHODS

A cross sectional study was carried out in September 2010.

The reference population aimed to cover all pregnant women attending the Obstetrics and Gynaecology clinics in RIPAS Hospital, Brunei Darussalam.

All pregnant women attending the Obstetrics and Gynaecology clinics were considered to be eligible and included but the admitted pregnant women in ward were excluded from the study. Pregnant women included in this study were at the age of between 20 to 40 years old.

Written informed consent was obtained from the Participants and Participants who consented to participate were given a questionnaire for them to answer. Questionnaire was developed by reviewing all the relevant facts from literature, article and books. The questionnaire was also evaluated and tested by asking the patients with the questionnaire so that they understood the questions that were being asked.

Data from the participants was then collected for analysis. Statistical analysis for this study was done using SPSS, version 17.0. Descriptive statistics is used to describe the reasons why the pregnant women chose to deliver naturally or having epidural analgesia in the Obstetrics and Gynaecology clinics, RIPAS Hospital in Brunei Darussalam. Fisher's exact test is used to determine the correlation of the choices of delivery at term by pregnant women among the races and between the age groups.

The study was conducted after the approval of institutional ethics committee.

RESULTS

From the fifty-five participants, 50(91%) responded by completing the questionnaire. Details of the characteristics of study respondents are shown in table 1. Mean of age (years) is 29.54. Standard Deviation of age is 5.807.

The preferred choices of childbirth by pregnant women in Obstetrics & Gynaecology clinics, RIPAS Hospital was natural by 74% , (95% CI: 59.4% - 84.9%)while by epidural analgesia was 26%, (95% CI: 15.1% - 40.6%). (Figure 1)

The Reasons why pregnant women chose to deliver naturally were to feel the pain, no exposure to epidural earlier, fear of allergies and others with 62%, 24%, 8% and 6% respectively. The main reason of having natural childbirth was to feel the pain with 62%.The other reasons were due to side effects of epidural and afraid of C-section (Figure 2).

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Table 1: Characteristics of study sample (n =50)

Variable	n (%)
Age (Years)	50 (100.0)
Race	
Malay	41 (82.0)
Others	9 (18.0)
Nationality	
Bruneian	44 (88.0)
Permanent Resident	1 (2.0)
Others	5 (10.0)
Religion	
No religion	1 (2.0)
Muslim	45 (90.0)
Others	4 (8.0)
Occupation	
Unemployed	19 (38.0)
Employed	31 (62.0)
No. of previous deliveries	
No deliveries	15 (30.0)
Less than or equal to 5	32 (64.0)
More than 5	3 (6.0)
Gestation weeks of pregnancy	
First trimester	1 (2.0)
Second trimester	11 (22.0)
Third trimester	38 (76.0)
Prefer choice of delivery	
Natural childbirth	37 (74.0)
Epidural analgesia	13 (26.0)

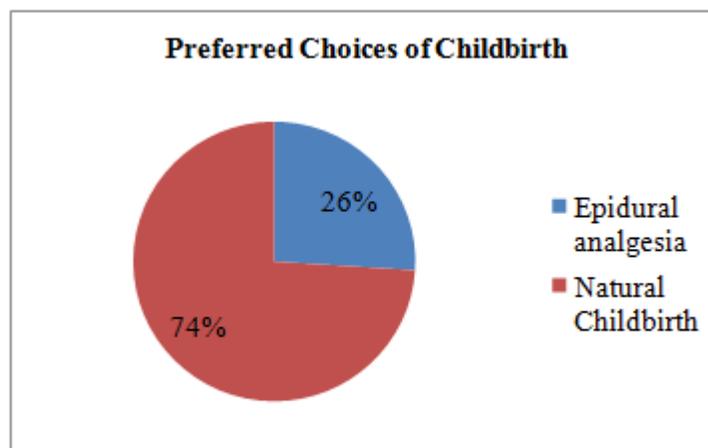


Figure1: Preferred choices of childbirth

Research Article

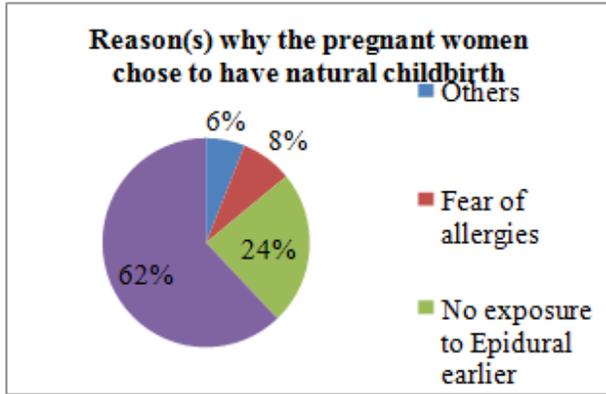


Figure 2: Reason(s) why the pregnant women chose to have natural childbirth

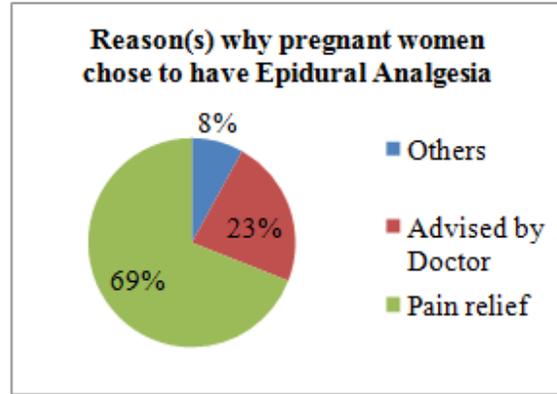


Figure 3: Reason(s) why pregnant women chose to have Epidural Analgesia

The Reason(s) why pregnant women chose to have epidural analgesia were due to pain relief, being advised by the doctor and other such as having trauma during previous pregnancy, with 69%, 23% and 8% respectively. The main reason for choosing epidural analgesia was pain relief with 69% (Figure 3). The choices of delivery at term by pregnant women either by natural or using epidural between the age groups were not significantly different ($p=0.567$). Therefore, there was no significant association between the choices of delivery at term and age (Table2).

Choices of delivery at term by pregnant women between the age groups

Table 2: Association between choices of delivery and age

Variable	n	What way of delivery do you prefer for current pregnancy?		X^2 (df)	P values
		Natural childbirth n (%)	Epidural analgesia n (%)		
Age					
20-30	26	19 (73.1)	7 (26.9)	1.00 (1)	0.567 ^b
31-40	24	18 (75.0)	6 (25.0)		

^bFisher's exact test for independence

Choices of delivery at term by pregnant women among the races

Table 3: Association between choices of delivery and races

Variable	n	What way of delivery do you prefer for current pregnancy?		X^2 (df)	P values
		Natural childbirth n (%)	Epidural analgesia n (%)		
Race					
Malay	41	29 (70.7)	12 (29.3)	0.41 (1)	0.250 ^b
Others	9	8 (88.9)	1 (11.1)		

^bFisher's exact test for independence

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The choices of delivery at term by pregnant women either by natural or using epidural among the races were not significantly different ($p=0.250$). Therefore, there was no significant association between the choices of delivery at term and races (Table3).

DISCUSSION

There are 3 stages of labor. The first stage begins with regular contractions and ends with complete cervical dilatation at 10cm. The first stage has two phases – latent and active phase. During latent phase, the uterine contractions are mild and irregular and this softens and shortens the cervix. The contractions become more rhythmic and stronger. This is followed by active phase which begins at about 3-4cm of cervical dilatation (Cheng, 2009).

The second stage begins with complete cervical dilatation and ends with the delivery of the fetus. Then it is followed by third stage of labor. This stage is defined by the time period between the delivery of the fetus and the delivery of the placenta and fetal membranes. During this period, uterine contraction decreases blood flow which result in thickening and reduction of the surface area of myometrium. It lasts as long as 30 minutes (Cheng, 2009).

From this study in Brunei there were 74% pregnant women who chose to have natural childbirth whilst having epidural analgesia was chosen by 26%. Similar study from the West reported that there were over 50% who chose epidural analgesia (American Pregnancy Association, Epidural Anesthesia, 2007).

In our study, the pregnant women preferred to give birth naturally because they wanted to feel the labor pain (62%). The reason for this was due to religious and cultural belief.

While, the main reasons why the pregnant women chose to have epidural was because of pain relief (69%). The other study also showed that the main reason the women chose to have epidural was because of pain-free delivery in 76.5 % (Kukulu, 2008). The results for both studies were similar in this study, the choices of delivery at term by pregnant women between the age groups were not significantly different ($p=0.567$), there was no association between choices of delivery between age groups. Other study also showed that there was no significant difference between the age groups (Kukulu, 2008). This study and the other studies showed similar results because the age groups were between 20-40 years.

Malay pregnant women preferred to deliver naturally (70.7%) rather than having epidural (29.3%) (Table3). Other races such as Chinese, Indian, and Philippine, also chose to deliver naturally. The choices of delivery by pregnant women among the races were not significantly different ($p=0.250$). Other studies have documented receipt of epidural analgesia varied by race (Michelle, 2008).

The choices of delivery by pregnant women among the races were not significantly different in this study. Other studies have documented receipt of epidural analgesia varied by race. Epidural analgesia is a commonly employed technique of providing pain relief during labor. Family physicians who perform obstetrics may discuss this method of pain control with their prenatal patients, explaining to them the risks and benefits before the onset of labor. In addition, women can be encouraged to attend childbirth clinics to help them prepare for stresses that may arise during labor and delivery.

Limitations of the present study were due to smaller sample size, and unequal number of pregnant women among the races.

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Research Article

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